

What is claimed is:

1. An electric motor, in particular a starter device for internal combustion engines in which an electric resistor (57) with a negative temperature coefficient
5 is connected at the beginning of the main current path (49) of an electromagnetically excitable rotor (53) of the electric motor (16), wherein the electric resistor (57) contains at least one monocrystalline semiconductor.
- 10 2. The electric motor as recited in claim 1, wherein the monocrystalline semiconductor (90, 93) is comprised of high-doped silicon and at least one region (92) with low doping that is likewise monocrystalline and is in particular produced by means of epitaxy.
- 15 3. The electric motor as recited in claim 2, wherein a doping profile is produced in which the high doping in the region (90, 93) is approximately $1e20cm^{-3}$ and the region (92) with the low doping has a doping between $1e14cm^{-3}$ and $1e15cm^{-3}$.
- 20 4. The electric motor as recited in claim 2, wherein a doping profile is produced so that within a predeterminable temperature range, in particular from 150 – 250°C, when there is a slight temperature change, the electric resistance of the component changes by large amounts, in particular by a factor of up to 100.
- 25 5. The electric motor as recited in claim 1, wherein the monocrystalline semiconductor (90, 93) is comprised of high-doped silicon and at least one region (95) with polycrystalline silicon.
- 30 6. The electric motor as recited in claim 5,

wherein the parameters of the region with polycrystalline silicon are selected so that within a predeterminable temperature range, when there is a slight temperature change, the electric resistance of the component changes by large amounts, in particular by a factor of up to 100.

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7. The electric motor as recited in claim 6, wherein the predeterminable temperature range with the resistance jump lies at approximately 200°C.

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8. The electric motor as recited in claim 1, wherein the monocrystalline semiconductor is comprised of a material with a high intrinsic charge carrier density and a predeterminable, in particular low, energy gap.

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9. The electric motor as recited in claim 8, wherein the monocrystalline semiconductor is a germanium semiconductor.

10. The electric motor as recited in claim 8, wherein the monocrystalline semiconductor is a composite semiconductor, in particular a III-V semiconductor, preferably an InSb or InAs semiconductor.

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11. The electric motor as recited in one of the preceding claims, wherein the resistor (57) has a metallization (91, 94) on both sides.

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12. The electric motor as recited in one of the preceding claims, wherein the resistor (57) is fastened in an integrally joined fashion between two conductors (80, 83, 88).

30 13. The electric motor as recited in one of the preceding claims,

wherein the assembly comprised of the resistor (57) and the two conductors (80, 83, 88) is enclosed by a protective casing (85).

14. The electric motor as recited in one of the preceding claims,
5 wherein the casing (85) is a cover (59)

15. A temperature-dependent resistor as recited in one of the preceding claims,
wherein it is used to produce a predeterminable temperature dependency.

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